

## FACTORING

$$x^2 + \underline{17}x + \underline{52} = (x+3)(x+14)$$

$$52 = 1 \cdot 52$$

$$3 + 14 = \underline{17}$$

$$52 = (-1)(-52)$$

$$52 = 2 \cdot 26$$

$$52 = (-2)(-26)$$

$$52 = \underline{3 \cdot 14}$$

$$52 = (-3)(-14)$$

SOLVE (BY FACTORING)

$$x^2 + 17x + 52 = 0$$

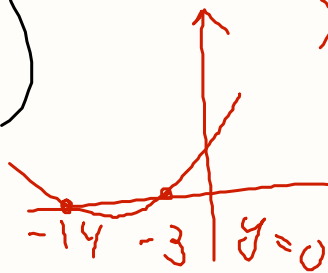
$$(x+3)(x+14) = 0$$

$$x+3=0$$

$$x_1 = -3$$

$$x+14=0$$

$$x_2 = -14$$



$$x^2 - \underline{x} - \underline{20}$$

FACTOR

$$(x-5)(x+4)$$

SOLVE

$$x_1 = 5$$

$$x_2 = -4$$

$$-5 \cdot 4 = -\underline{20}$$

$$-5 + 4 = -\underline{1}$$

$$x^2 - 7x - 18$$

$$(x-9)(x+2)$$

$$x_1 = 9$$

$$x_2 = -2$$

$$x^2 + 11x + 28$$

$$(x+4)(x+7)$$

$$x_1 = -4$$

$$x_2 = -7$$

$$\begin{array}{r} x+4=0 \\ -4 \quad -4 \\ \hline x=-4 \end{array}$$

$$\begin{array}{r} x+7=0 \\ -7 \quad -7 \\ \hline x=-7 \end{array}$$

$$x^2 - x - 90$$

FACTOR

$$(x-10)(x+9)$$

SOLVE

$$x_1 = 10$$

$$x_2 = -9$$

$$x^2 + 11x - 26$$

FACTOR

$$(x+13)(x-2)$$

SOLVE

$$x_1 = -13$$

$$x_2 = 2$$

## FOIL METHOD

$$(3m+2)(3m+4) = 9m^2 + 18m + 8$$

$$F: 3m \cdot 3m = 9m^2$$

$$O: 3m \cdot 4 = \underline{12m}$$

$$I: 2 \cdot 3m = \underline{6m}$$

$$L: 2 \cdot 4 = 8$$

$$(x+3)(2x^2-5x+7) = 2x^3 - 5x^2 + \underline{7x}$$

$$+ \underline{6x^2} - \underline{15x} + 21 =$$
$$2x^3 + x^2 - 8x + 21$$

HOME  
Alg. 2 HOLT  
p. 296  
40, 42, 44, 46  
FACTOR